‘Is red’ and ‘looks the same’

PHIL 20229
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One especially interesting version of the sorites paradox is the one involving a long series of color shades, each indistinguishable from the preceding one, but which is such that the first is clearly distinguishable from the last.

That version of the paradox went like this:

1. Swatch 1 is red.
2. If swatch 1 is red, then swatch 2 is red.
3. If swatch 2 is red, then swatch 3 is red.

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C. Swatch 10,000 is red.

This argument seems like an especially hard to resist version of sorites reasoning, since the sorites premise of this argument — for any objects x, y, if x looks the same as y and x is red, then y is red — seems especially attractive. How *could* two objects be completely indistinguishable in respect of color, and yet one be red and the other not?

This version of the sorites argument, unlike the others, also relies on an assumption: the assumption that there could be a *phenomenal continuum* of color patches such that the first is distinguishable in color from the last, and yet none is distinguishable from the adjacent patch in the series. However, this assumption clearly seems to be true — if we had a million color patches, couldn't we set up such a case?

We can also imagine sitting in front of a movie screen whose color is changing so slowly from red to orange that you can never notice a change from one moment to the next, and yet the initial color is clearly distinct from the final color. (Or imagine waking up and watching your room get lighter and lighter, very gradually.)

So it seems that there could be a million-patch long phenomenal continuum. But could there be a phenomenal continuum of only 3 color patches? It might seem not — it would be hard to come up with just 3 patches such that patch 1

and patch 2 are indistinguishable, and patch 2 and patch 3 are indistinguishable, though patch 1 and patch 3 are distinguishable.

The surprising result is that these two natural views are in conflict: if a 1 million patch long phenomenal continuum is possible, so is a 3 patch long phenomenal continuum. A sort of proof of this result can be presented as follows:

Imagine that there is a 4 patch long continuum. Then:

> 1 & 2 are indistinguishable
>
> 2 & 3 are indistinguishable
>
> 3 & 4 are indistinguishable
>
> 1 & 4 are distinguishable

Now consider 1 and 3. Are these distinguishable, or not?

Suppose that they are. Then, since 1 & 2 and 2 & 3 are indistinguishable, 1,2, and 3 compose a 3-member phenomenal continuum.

Suppose that they are not distinguishable. Then, since 3 & 4 are indistinguishable and 1 & 4 are distinguishable, 1, 3, and 4 compose a 3-member phenomenal continuum.

So, if there is a 4-member phenomenal continuum, there is a 3-member phenomenal continuum.

Can you see how to adapt this argument to show that if there is a 5-member phenomenal continuum, there is also a 4-member phenomenal continuum?

Can you see how to adapt this argument to show that if there is a n-member phenomenal continuum such that $n > 3$, there is also an $n - 1$ member phenomenal continuum?